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A REPLY TO *FAIRPLAY'S* CRITICISM

1.

Fairplay, in its foreign edition dated December 1, 1927, Vol. CV., No. 2, 325, quoted a few paragraphs from my article on "The Effects of Shipping Competition on Freight Rates," published in the Kyoto University *Economic Review*, which was issued in July, 1927, and made some comments on them.

Fairplay sets out with the following remark:—

> "An article on "the effects of shipping competition on freight rates," by Professor S. Kojima, published in the July number of the Kyoto University Economic Review, may be of interest owing to the novelty of certain statements contained in it, but is lacking in instruction through their incorrectness."

It refers to three points as incorrect. The first point is my statement that even if the market freight rate may fall below the laying-up point, shipowners sometimes continue to operate their ships under certain circumstances. The second point is my assertion that the value of a ship is reduced to nil when the cost of shipping service becomes equal to the freight rate. The third and last point is my reference to the "laying-up union" of trampowners.

2.

In his comment on the first-mentioned point, the writer of "*The Look-out Man*" of the *Fairplay* chooses to call my formula regarding the laying-up point "Professor Kojima's Formula" and makes the following observation:—

> "In discussing the 'laying-up' point of freight rates,

the author states that this 'becomes higher or lower according to the quantity of goods which the ship happens to carry.' Our cargo-boat owners, however, have always, and rightly so, been of opinion that it was the rate of freight which was the determining factor, while as to Professor Kojima's formula, showing the freight rate at the laying-up point, it should be pointed out that some owners do not lay up their vessels when this 'point has been reached'; and he himself, as the following extract indicates, admits that this occurs at least occasionally:—"

Then, the following quotations from my article are made:—

"In the tramp services, also, shipowners sometimes refuse to lay up their ships even when the market freight rate is below the lay-up point. One instance of this is furnished when a ship is mortgaged. The current price of a ship becomes nil when the cost of marine service supplied by it is equal to the marine freight. If anybody attaches any value to it, it is because he anticipates a rise in freight. In existing circumstances it has no value whatever as productive property, apart from the value of the materials of which it is built.

"When the market freight not only falls below the cost of marine service but reaches the laying-up point, the possession of the ship clearly means a loss to its owner. Then, the ship can only be of minus value. If, therefore, a debter shipowner lays up his ship in mortgage, the creditor will never fail to demand an additional security, as the laying-up the ship itself indicates that the mortgage is of minus value.

"If the creditor is well posted in shipping matters, he will demand an additional mortgage before the market freight falls below the cost of marine service, but, as the voyage account is not very evident to outsiders, the creditor remains indifferent in most cases, so long as the ship in question is operating. Once it is laid up, however, it becomes clear even to the most unobservant creditor

that it has been reduced to a minus value, and he will then insist upon having a fresh mortgage. As for the debtor shipowner, he tries, by hook or by crock, to continue his business at a loss in competition with his rivals, in order to avoid the painful necessity of putting up additional security, hoping the meanwhile for a fortuitous return of shipping prosperity."[1]

I fail to discover any incorrect representation of facts in any port of these quotations. The writer in *Fairplay* says that "it (the laying-up point of freight rate) was the rate of freight which was the determining factor," and seems to deny the existence of ships which, despite the freight rate falling below the laying-up point, continue to run under certain special circumstances, but I am afraid that such contention is hardly supported by the facts. This is all I have to say in reply to his criticism.

He takes the laying-up point to be "the determining factor," and takes the line that the shipowner has no alternative but to lay up his vessels when the freight rate falls to this point, arguing as though no ship could ever be expected to run at a freight rate below the laying-up point. His line of argument leads me to wonder whether what the writer in *Fairplay* and British cargo-boat owners call the laying-up point means something different from what I call by that name. The only conclusion that can be drawn from his explanation is that the laying-up point is, in the opinion of British cargo-boat owners as well as in his, the rate of freight which has fallen so low that shipowners, finding it impossible to make any profit, actually lay up their vessels. His argument, therefore, amounts to this, "The laying-up point is the rate of freight ruling at a time a ship is actually laid up.

Such an explanation is most common and most intelligible to people in general. Indeed, if the term "laying-up point" is used in this sense, it is self-evident that no ship is run when the freight rate falls below it. It explains

[1] Kyoto University Economic Review, Vol. II. No. 1. p. 75.

nothing scientifically, however. When I refer to a certain point in freight rates, which are constantly fluctuating upwards and downwards, as the laying-up point, I intend to indicate that, from the point of view of pure economic theory, shipowners ought to lay up their vessels when the rate of freight falls below it. Man does not, of course, always act in strict accordance with economic needs, and there is, therefore, nothing strange about some ships being operated when, according to pure economic theory, they ought to be laid up. Disregard of this economic theory entails economic disadvantages, and a shipowner is bound to go economically bankrupt as the result of an accumulation of losses, should he act in disregard of it for a long time. Such is the result of an economic law, which cannot be set at naught with impunity. One who wants to spit toward the heavens will do so, but his spittle will fall back over him. One can be no more free from the law of economics than from the law of gravity. The laying-up point to which I referred in my article designates what implies an economic law in the above sense; it by no means merely indicates the rate of freight charges at which shipowners actually lay up their vessels.

I shall quote a part of my article, for the convenience of those readers who, perhaps, may desire to know how I explained the "laying-up point" of the freight rate.

> "In order to explain the limit to which the freight rate can be lowered, some explanation is required about the elements constituting the cost of marine service. The cost of marine service can be classified in different ways, but here the classification will be made with the ship as the basic factor, for convenience sake in our present purpose. The cost of marine service may be said to consist of the fixed cost, or the cost concerning the ship which forms the fixed capital, viz., the interest on the original price of the ship, the depreciation of the ship's value; the managing cost, as represented by the insurance on the ship, cost of repairs, wages and the pay for the crew and officers, cost of food supplied to the crew and to the officers, cost of the articles consumed,

miscellaneous expenses on board, and shore expenses (that is to say, part of the so-called office expenses allotted to it); and the navigation and handling costs, namely, fuel expense, cargo expense, expense of account of passengers, and harbour expense. As regards the fixed cost, it is absolutely necessary, so long as the shipping business is carried on, no matter whether marine service is offered or not, while the managing cost can be somewhat reduced, in case marine service is not supplied, though some part of this cost is needed, irrespective of marine service. So far as the navigation and handling cost is concerned, this is not required at all, if marine service is not supplied.

" The amount as well as the percentage of the fixed, the managing, and the navigation and handling costs varies according to the lines on which ships are employed, and also on the size and the age of the ships and the kinds of engines used, and the nature of the cargo carried; but it is hardly necessary to say that when the freight revenue falls short of the aggregate of all these expenses, the shipowner stands to lose by continuing navigation. So, if the shipping business is one which could be suspended without any loss being incurred, and if those in this business could freely withdraw from competition at any time, shipowners would, in such cases, suspend the operation of their vessels and lay them up.

" But if a shipowner withdraws from competition and decides to lay up his ships, he must be prepared to bear the fixed cost, or the expenses on account of the fixed capital invested in his ships, and the positive cost needed for the maintenance of the ships, or part of the managing cost. It is clearly a loss to the shipowner that he has to bear such expenses in time of business suspension. From the point of view of the shipowners, therefore, if the loss arising from continuing their marine transportation business is less than the loss that results from laying up their ships, it is better for them to continue the business, even though the freight rate does not come up to the cost of marine service. This raises the question how great a decline in the freight revenue

caused by the falling of market freight rates makes the loss arising from continuing the shipping business equal to the loss resulting from the laying up of ships.

"Now let f denote the fixed cost during a certain period, m, the managing cost involved when the ship is in operation, n, the navigation and handling cost, m', the managing cost involved when the ship is laid up, and E, the freight earning, during the same period respectively. Then the total costs of marine service can be indicated by $(f+m+n)$, while the loss involved in transportation by $(f+m+n)-E$, and the loss resulting from the laying up of the ships by $(f+m')$. Thus it will be seen that the formulate (a) and (b)

(a) $(f+m+n)-E=(f+m')$

(b) $E=(m-m')+n$

represent the freight earning on the demarcation line dividing the continuance of marine service and the laying up of the ships on the part of the shipowners. If a shipowner can realise an earning above this standard, he will continue to keep his ships in operation; while if the freight earning falls below it, he will, theoretically speaking, decide to lay up his ships, from the economic point of view. Therefore I want to say that the earning of a ship is at the *laying-up point*, when it is equivalent to E, in the equation of $E=(m-m')+n$.

"Inasmuch as the shipowner finds it advantageous to continue marine service until the laying-up point is reached, even if the freight earning does not come up to the cost of marine service, no relaxation of competition can be looked for, so long as the freight earning is above the laying-up point. At what point, then, does the freight rate settle itself under such competition? Before replying to this question, it is necessary to add a little more explanation about the laying-up point.

"As already stated, the laying-up point of shipping earning can be indicated by

$$E=(m-m')+n$$

The values of the terms of this equation, however, differ with the ship. As can be seen from the above formula, the laying-up point is in direct proportion to m, representing the managing costs when ships are operating, and the navigation and handling costs, n, and in inverse proportion to m', which represents the managing costs when ships are laid up. The various expenses incurred while ships are laid up, as represented by m', have nothing to do with the efficiency of ships and engines, but the expenses on account of the officers and crew, fuel and the loading and landing of cargo, which are included in m and n, representing the managing costs and the navigation and handling costs respectively, have a good deal to do with the efficiency of ships and engines, because ships with high efficiency can be worked by a comparatively small crew, and little trouble is involved in the loading and landing of cargo or in taking in fuel. Again, highly efficient engines need a comparatively small quantity of fuel to generate an unusual quantum of horse power. The value of m and n is smaller for ships and engines of high efficiency as compared with their value for ships of lower efficiency, with the natural result that both the cost of marine service and of the laying-up point of freight earning are low.

"Thus, the laying-up point varies with the ship. Even with the same vessel, it varies, as the quantity of the goods which it chances to carry differs. In the former formula indicating the laying-up point, E represents the freight earning. Freight earning is the product of the quantity of cargo loaded on a ship multiplied by the rate of freight. Taking t' to indicate the goods loaded and r the rate of freight, the equation $E=rt'$ will be obtained, and the laying-up point may be shown by the following expression, in regad to the rate of freight:—

$$r=\frac{(m-m')+n}{t'}$$

"In this equation, it is shown that r or the freight rate at the laying-up point is proportional to $(m-m')+n$ and in

inverse proportion to t' or the quantity of goods loaded. In the relation of t' to $(m-m')+n$, as t' or the quantity of goods loaded becomes smaller, the special cost of marine service in regard to the transportation of cargo, which is included in what is expressed by $(m-m')+n$, becomes equally smaller, but the cost to be reduced forms only a small part of the navigation and handling costs represented by n. The managing costs involved when the ship is in operation, as indicated by the letter m, has nothing to do with the amount of t'. Nor has m', which stands for the managing costs involved when the ship is laid up, anything to do with t'. Be it observed that m is always larger than m'. Even the cost of fuel, which constitutes the largest part of the navigation and handling costs, as represented by n, is not influenced substantially by the amount of t'. As to pilotage, harbour dues and tonnage duty, they have nothing whatever to do with t'. Only the wages for the coolies employed in loading and landing operations, the cost of materials needed for such operations and the insurance for the carriage of the goods shipped, increase or decrease in proportion to the amount of t'. The special cost of marine service for the goods carried varies according to the steamship routes, especially the shipping and landing ports, and the kinds of goods carried, and yet, it forms only a small part of the whole, represented by $(m-m')+n$. The reduction that comes about in $(m-m')+n$, because of the reduction in t', is very slight, and in no circumstances is there any proportionate increase or decrease between $(m-m')+n$ and t'.

"As the rate at which $(m-m')+n$ is reduced in consequence of the reduction in t' is comparatively very slight, it is clear that in $r=\frac{(m-m')+n}{t'}$, r, as representing the freight rate at the laying-up point, waxes as t' becomes smaller. Now, let the full carrying capacity of the ship be indicated by t, then her laying-up point is lowest when t' is equal to t, that is to say, when $r=\frac{(m-m')+n}{t}$, and as

t' becomes smaller than t, the freight rate representing the laying-up point goes higher. In other words, when the quantity of goods which the ship is called upon to carry is equal to her full carrying capacity, that is to say, when her holds are fully occupied, the freight rate denoting her laying-up point is lowest. As the quantity of goods which she chances to carry falls below her full carrying capacity, the freight rate embodying her laying-up point becomes gradually higher. Thus, the laying-up point becomes higher or lower, according to the quantity of goods which the ship happens to carry."[1]

3.

I will return to the subject and will continue my reply to the criticism. Judging from the fact that immediately before quoting the before-mentioned paragraph, the writer of the *Fairplay* criticism refers to my remark, "This (the laying-up point) becomes higher or lower according to the quantity of goods which the ship happens to carry," it is possible that both quotations, singularly associated in his mind, led to a misunderstanding on his part. Needless to say, the earnings accruing from a single voyage to one port do not form the basis of calculating the profit or loss of a tramp steamer. The earnings of a series of voyages essentially form the basis of squaring accounts. Such being the case, a ship is not necessarily laid up, simply because the earnings from a single voyage have fallen short of the laying-up point. She is laid up only when her freight revenue has fallen below the laying-up point on successive trips. This point is dealt with in my article in the *Economic Review* as follows:—

> "But as it is intended that the cost of a number of sailings (joint costs of several trips) should be met out of the total freight earning accruing from a succession of voyages, the ship is not to be laid up simply because the freight earning for a single trip has fallen short of the

[1] op. cit., pp. 67–72.

laying-up point. It is not until there occurs a general decline in the quantity of the goods entrusted to her for transportation on several voyages or there has developed a tendency for the earning from voyages to fall below her laying-up point that she is laid up. Supposing that a ship makes five voyages, on each of which she is to carry a different kind of merchandise, a, b, c, d and e, there will be five kinds of r and t'. In this case, the ship's earning is at the laying-up point when it can be shown by the following formula:—

$$(r_a t'_a + r_b t'_b + r_c t'_c + r_d t'_d + r_e t'_e) = (m - m') + n$$

And when there develops a tendency for

$$(r_a t'_a + r_b t'_b + r_c t'_c + r_d t'_d + r_e t'_e) < (m - m) + n$$

to continue, this ship is compelled to be laid up.[1]"

A perusal of the above explanation will show the reader that the laying-up point, as I call it, exists not only for a single voyage but for a series of voyages also. As, in each voyage, the product of the cargo quantity multiplied by the rate of freight represents the ship's freight revenue, it is hardly necessary to say that the amount of the freight revenue is in proportion to the quantity of goods carried, provided there rules a certain rate of freight. This being so, the laying-up point in the freight rate, or the freight rate at the laying-up point, rises or falls according to the quantity of goods which the ship concerned may have the opportunity of carrying. In other words, in case the ship carries a big amount of cargo, a comparatively low freight rate can be above the laying-up point, while, on the contrary, if she happens to carry a small amount of cargo, even a comparatively high freight rate may be found to be below the laying-up point.

4.

The second point criticised by *Fairplay* is my contention that the value of a ship ought to be nil when the rate

[1] op. cit., pp. 72–73.

of freight has fallen so low that it has become equal to the cost of maritime service. The journal comments :—

> "There were, of course, many instances a year or two ago of new vessels being laid up after their trial trips, although money had been borrowed on them. To say, however, that the 'current price' of a vessel 'becomes nil when the cost of marine service supplied by it is equal to the market freight' is going altogether too far, for a prudent mortgagee always has an ample margin, generally 50 per cent of a vessel's market value, and it is a matter of indifference to him whether she is laid up or not, for, if an owner is getting into financial difficulties, the running of the steamer at a loss might make it more costly for the mortgagee, seeing that the vessel might be chartered for an outward voyage with all the freight payable in advance, and he might have to seize her at a foreign port, and meet all the charges there and other expenses, as has happened more than once. Again, if his mortgage has to be paid off over a certain number of years, he, so long as the interest and instalments are regularly met, cannot demand 'additional security.'"

I cannot quite understand this criticism. How can a ship have any value which fails to realise an income sufficient to cover the cost of shipping service? The value of producers' goods depend solely upon the profit which they bring. Their value is in proportion to the rate of profit and the period in which they are capable of producing it. This is a fact which must certainly be obvious to any person with a most elementary knowledge of economics. It is, therefore not going altogether too far to say that the value of producers' goods, from which an income is derived, is reduced to nil, when the revenue and the cost of production become equal.

It must, however, be noted that the producers' goods, which actually bring no profit, possess some value, provided they give promise of future profit. Even in the case of ships, the cost of maritime service which has become equal to the

freight revenue because of the decline of the freight rate—not even excepting those vessels, whose voyage accounts show a loss, even though no due provision being made either for depreciation or for the accounting of the interest on the capital invested in them—they can be sold at a certain price to optimistic purchasers who anticipate a rise in the rate of freight. In explaining this point, therefore, I did not neglect to add, "If anybody attaches any value to it, it is because he anticipates a rise in freight."[1] I know very well that in the shipping market, ships which are actually bringing no profit or are positively causing a loss to their owners often change hands at a fairly good price. In such transactions, however, the purchasers invariably anticipate a rise in freight. If the writer in *Fairplay* had stopped to observe what is actually taking place in the shipping market, he would probably not have taken exception to my statement.

5.

With regard to the question of whether the mortgagee will demand additional security for a ship in mortgage, which has been laid up, I think the quotations made by the *Fairplay* writer from my article furnishes an effective reply in themselves. It is true, as that writer points out, that the mortgagee will take no action whatever, if the ship in mortgage is laid up, provided he thinks that the seizure of the ship abroad or his own operation of the ship by the enforcement of his mortgage, will only end by adding to his own burdens or losses. This is because nothing good can be expected of any action taken in the matter. A wise mortgagee is sure to form a correct estimate of the situation. I had the attitude of such a wise mortgagee in my mind's eye when I made the statement. As he knows that the enforcement of a mortgage often redounds to the mortgagee's

[1] op. cit., p. 75.

disadvantage, he demands additional security in things other than the ship. It is difficult to me, being in Japan, to cite examples in England in this regard at present, but copious examples can be cited of contracts concluded in Japan for the loan of money secured on ships, which provide for additional security being given, if occasion demands.

The writer of the *Fairplay* criticisms says that "if his mortgage has to be paid off over a certain number of years, he, so long as the interest and instalments are regularly met, cannot demand additional security." He is quite correct, for what warrant can there be for demanding additional security, if, after converting the original debt into one payable by instalments, the debtor conscientiously fulfils his obligations? I should, however, like to ask the writer why the creditor cannot demand fresh security to guarantee the debtor's payments, when the debtor asks him for consent to the instalment payments?

6.

The third point of criticism refers to the laying-up union of owners of tramp steamers. He quotes:—

"PROFESSOR KOJIMA concludes his article as follows:—

'Thus, in the shipping business, also, the market price, when it is below the cost of production, has a tendency to rise so as to agree with it in the end, but such a time does not come so soon as advocates of the normal value theory usually believe. It is not until after the market is spoiled that it comes. This makes the owners of tramp steamers have recourse to a 'joint laying-up agreement' or 'the laying-up union' in self-defence, when there occurs an over-supply of tonnage. In this way, they try to avoid the danger of bankruptcy under the pressure of free competition.

'As regards the owners of regular liners who, unlike the owners of tramp steamers, find it impossible to resort to the practice of laying-up their vessels when freight has

dropped, but are obliged to continue competition, as far as their financial circumstances permit, for the protection of the lines which they have been operating, they go a step further, and form a shipping ring, or what is called a "Conference."

'In other words, the competition which is carried on in the shipping world by natural processes, causes the owners of tramp steamers to resort to methods calculated to modify competition by co-operation, even for a time, when business depression prevails. It also causes the owners of regular liners to form a cartel among themselves which can ensure for them a monopolistic position by modifying or restricting mutual competition permanently. Thus, a state of affairs in which freight can be artificially controlled is created, either temporarily or permanently, independently of normal value principles.'"

After making these quotations, the *Fairplay* writer concludes his lengthy article introducing and criticising my views as follows:—

"My only comment is that Professor Kojima does not seem to be aware that there is neither a 'joint laying-up agreement' nor a "laying-up union" in existence."

In replying to this criticism, I feel called upon to mention for the benefit of the readers the fact that in my original article, the paragraphs quoted by the *Fairplay* critic are followed by the remark, "How these combinations affect the freight market, I dealt with in detail in my article in the first number of this *Review*," and that in my article on "Shipping Combinations as seen from the Viewpoint of Freight Theory" in the Kyoto University *Economic Review* Vol. 1., No. 1, to which reference is made, I dwelt on the fact that "the laying-up union is possible only when a certain shipping market is isolated, under some peculier circumstances, from the world's shipping circles or when it is temporarily free from competitors from other shipping markets, and that a general or a lasting laying-up union is impossible unless it is formed by all the owners of tramp

steamers in the world." The writer in *Fairplay* has evidently jumped to his hastry conclusions because he had no occasion to read my previous article.

As I have stated, a general and lasting laying-up union is impossible, but it often happens that trampowner make futile efforts to bring it about in one form or another, when the shipping world is depressed and competition grows very keen. Instances of this kind are by no means rare. It must still be fresh in the public memory in Japan that one attempt of the kind was made in Kobe some years ago. A note entitled "Mr. Lofgren's Laying-up Scheme," immediately preceding the criticism of my article in the issue of *Fairplay* for December 1st, 1927, also shows that there were and still are in Norway as well as in England schemes of laying-up ships by agreement or of forming laying-up unions, though such projects have never met with the approval of either shipowners' associations or of the Government. I recommend this note appearing in "The Look-Out Man" in his own editing to the attention of the *Fairplay* critic.

I refuse to accept any part of the criticism of my article by *Fairplay*, but I am none the less sincerely grateful to the writer of the magazine for his kind review of and comment on my article, to which he gave so much space in his valued journal.

SHOTARO KOJIMA.